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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,440	05/24/2001	Michael A. Marcus	80509THC	2654

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EXAMINER

STOCK JR, GORDON J

ART UNIT PAPER NUMBER

2877

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,440

Applicant(s)

MARCUS ET AL.

Examiner

Gordon J Stock

Art Unit

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NAF

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,13-15,17,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 3-5,7-12,16,18-22,25 and 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 60 of Fig. 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 60' of Fig. 5. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to for the following informality: on line 10 of page 11 the phrase, "reflective photonic probe 60 shown in Figs. 3 and 4," should read --reflective photonic probes 60 and 60' shown in Figs. 3 and 4--. Correction is required.

Claim Objections

5. **Claims 1 and 15** are objected to for the following: the terms, “the motion of the film,” and “the plane of the film,” lack antecedent basis. **Claims 4 and 5** are objected to for “the translation stage” lacks antecedent basis. **Claims 11 and 12** are objected to for “the motion image of the film” lacks antecedent basis. Claim 19 is objected to for “the gate” lacks antecedent basis. **Claim 26** is objected to for “the first and second detection fibers” lack antecedent basis. Corrections are required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claim 14** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to **claim 14**, the phrase, “the light source,” is indefinite, for it is unclear as to which light source is located adjacent the notch filter. Clarification is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. **Claims 1, 2, 6, 13, 15, 17, 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hutchison (3,471,225)** in view **Szymer (3,672,757)** and **Heaney et al. (3,639,048)** and **Shishido (4,538,062)**.

As for **claims 1, 2, 15**, Hutchison discloses the following: a probe mounted in a film gate; a measurement light source coupled to the probe; a photodetector; signal processing for producing a signal representing a motion of the film perpendicular (Fig. 3, cols. 7-8). Szymer and Heaney have similar embodiments for determining ranging and focusing in a projector (Szymer Figs. 2-3; Heaney Fig. 1). As for an optical fiber, Hutchison is silent. The Examiner takes official notice that optical fibers are well known in the art for coupling optical elements. Therefore, it would be obvious to one skilled in the art at the time the invention was made to have an optical fiber for coupling of optical elements. As for the measurement light source having a different wavelength and a narrow band filter, they are silent. However, Shishido in a focusing detecting device teaches that an infrared source and an element suitable for detecting the infrared source to reduce the effects from the alternate sources of light (col. 11, lines 10-25). Therefore, it would be obvious to one skilled in the art to have the Hutchison system have an infrared source with a bandpass filter to make the detector sensitive the infrared wavelengths in order to reduce effects from the alternate sources of light. As for a translation stage, Szymer demonstrates a translation stage for the measurement apparatus (Figs. 1 and 2).

As for **claim 6**, it is well known in the art to have means representing shutter motion such as an open shutter. Therefore, it would be obvious to one skilled in the art at the time the invention was made to have a shutter that comprises movie projectors to have means for representing shutter motion to indicate an open shutter.

As for **claims 13 and 24**, Szymber (col. 4, lines 50-75; col. 5, lines 1-40), Heaney (Fig. 1), and Hutchison imply that a measuring flux density of the light over the film gate is performed to correlate it to focus and thermal effects.

As for **claims 17 and 23**, Heaney and Hutchison both detect thermal effects due to the primary light source.

Allowable Subject Matter

10. **Claims 3-5, 7-12, 16, 18-22, 25, and 26** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

As to **claim 3**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an apparatus for measuring deflection of a film in a film gate “a reflectivity compensated probe having first and second detection optical fibers,” in combination with the rest of the limitations of **claims 3 and 5**.

As to **claim 4**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in apparatus for measuring a deflection of a film in a film gate “performing a calibration using the Z translation,” in combination with the rest of the limitations of **claim 4**.

As to **claim 7**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in apparatus for measuring deflection of a film the film gate is in a film scanner, in combination with the rest of the limitations of **claims 7 and 11**.

As to **claim 8**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an apparatus for measuring a deflection of a film the film gate is a recording gate of a film recorder, in combination with the rest of the limitations of **claims 8 and 12**.

As to **claim 9**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an apparatus for measuring a deflection of a film “separating the signal representing the motion of the film into thermal and mechanical components,” in combination with the rest of the limitations of **claim 9**.

As to **claim 10**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an apparatus for measuring a deflection of a film comprising a high speed camera for simultaneously capturing real and reflected images of the reflective photonic probe, in combination with the rest of the limitations of **claim 10**.

As to **claim 14**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in an apparatus for measuring a deflection of a film further comprising a notch filter, in combination with the rest of the limitations of **claim 14**.

As to **claim 16**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for measuring a deflection of a film the deflection is measured with the primary light source off,” in combination with the rest of the limitations of **claims 16, 18-21**.

As to **claim 22**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for measuring a deflection of a film “measuring the amplitude of the thermally induced buckling at a plurality of light intensities,” in combination with the rest of the limitations of **claim 22**.

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As to **claim 25**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for measuring a deflection of a film “simultaneously capturing real and reflected images of the reflective photonic probe” in combination with the rest of the limitations of **claim 25**.

As to **claim 26**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for measuring a deflection of a film “determining the ratio of the signals collected by the first and second detection optical fibers” in combination with the rest of the limitations of **claim 26**.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 3,617,119 to Pagel

U.S. Patent 3,778,545 to Metzger et al.

U.S. Patent 5,014,123 to Imoto

U.S. Patent 5,555,092 to Kaye et al.

U.S. Patent 5,604,533 to Eiberger

U.S. Patent 5,650,816 to Mead

U.S. Patent 5,943,090 Eiberger et al.

U.S. Patent 6,588,904 to Morton et al.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

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1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.


Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 872-9306

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (703) 305-4787. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gs

September 30, 2003


Zandra V. Smith
Primary Examiner
Art Unit 2877